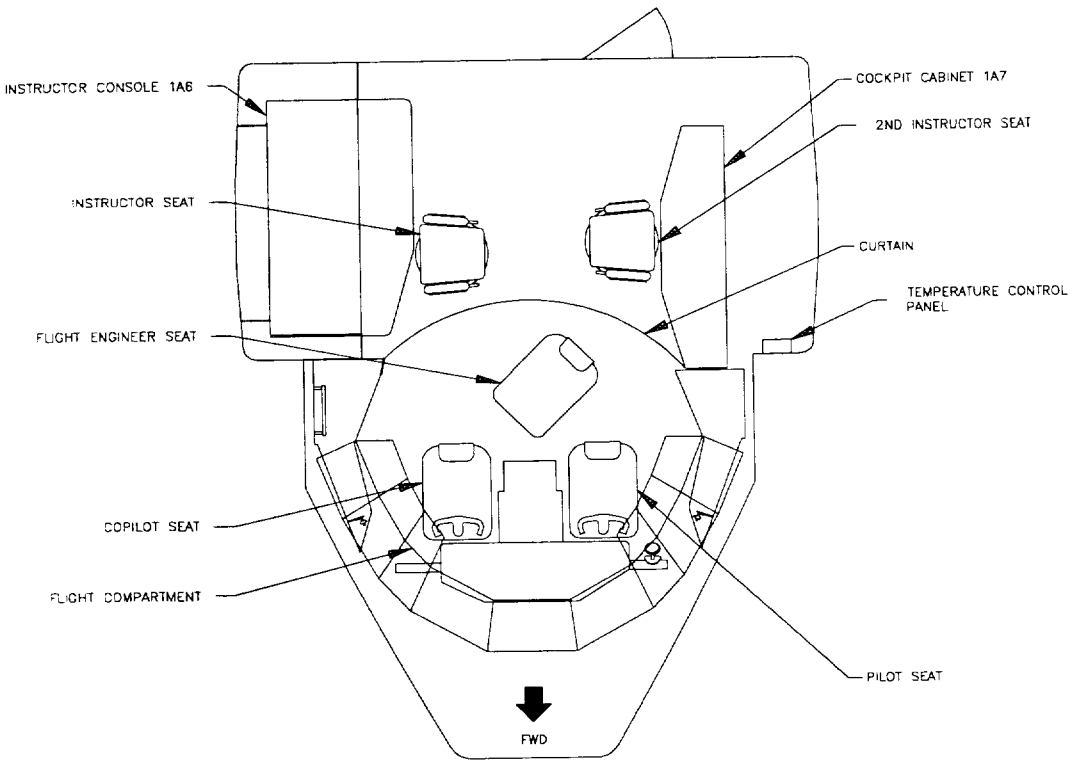
SUMMARY OF
KC-130R AIRCRAFT OPERATIONAL FLIGHT TRAINER (OFT)

May 1997 Device 2F107

NAVAL AIR WARFARE CENTER TRAINING SYSTEMS DIVISION ORLANDO, FLORIDA



TRAINING CATEGORY:

Aviation - Operational Flight/Weapon System

ORIGINATING AGENCY:

CNO/AIR

SECURITY CLASSIFICATION OF DEVICE:

Device 2F107 is unclassified.

PURPOSE OF DEVICE:

To provide pilot, copilot, and flight engineer ground training in cockpit familiarization and operations for the acquisition, development, and maintenance of ground, in-flight, safety and emergency procedures for the KC-130R aircraft.

INTENDED USE:

To train Marine Corps, Navy and Coast Guard pilots and flight engineers in the normal and emergency procedures in the KC-130R aircraft. Flight crew training will include that which is necessary for transitioning pilots and flight engineers, NATOPS currency, and refresher checks. The device has the capability to exercise the flight crew in all procedures from pre-start check through start, taxi, take-off, climb, inflight maneuvers (including refueling), let-down, approach, landing, and shut-down. A six degree of freedom motion system is provided as is a GE Compu-Scene II visual system.

FUNCTIONAL DESCRIPTION:

Device 2F107 is contained within a building consisting of a training area, a maintenance/computer area, and a hydraulic equipment area. The device is a training system for pilot, copilot, and flight engineer students assigned to the KC-130R aircraft crews; accurate simulation of the aircraft is provided. Six degree of freedom motion systems provide movement of the flight compartment, and visual scenes are viewed from the pilot and copilot seats. The instructor station is located behind the student stations in the flight compartment. The instructors are provided with two (2) touchscreen monitors, and control panels by which the training situation may be observed and controlled. The flight compartment is constructed to appear identical to the flight station of the KC-130R aircraft, with controls providing the proper "feel" under all conditions of flight.

PHYSICAL INFORMATION:

The device is installed in a permanent building at MCAS El Toro, CA. The general dimensions of the building are 70' wide x 97' long x 30' high.

OPERATIONAL EQUIPMENT (all unmodified):

Ground Proximity Warning System (GPWS) Mark 11, Flight Control System (FCS) FCS-105, Altitude Alerter/Preselect System (AAPS), Combined Altitude Radar Altimeter (CARA), AN/APN-232, Inertial Navigation System (INS) LTN-72, Omega Navigation System (ONS) LTN-211, Automatic Direction Finder (ADF) Radio Compass DF-206, Very High Frequency (VHF) Transceiver AN/ARC-186, VHF Receiver AN/ARN-126, Tactical Air Communications and Navigation (TACAN) Radio Set AN/ARN-118, True Airspeed System (TAS) B&D 2504, Direct Air Support Center (DASC), Compass System C-12, Global Positioning System (GPS), and Multimode Radio Set AN/ARC-210(V).

EQUIPMENT REQUIRED (NOT SUPPLIED):

None.

POWER REQUIREMENTS:

Input: (a) 120/208 Vac 60 Hz 3 phase 4 wire.
(b) 277/480 Vac 50 Hz 3 phase 4 wire.
Estimated load: 194 kVA (277/480 V)
64 kVA (120/208 V)

INSTALLATION REQUIREMENTS:

Minimum Installation Area: 38' x 33' x 28' high simulator room. Floor loading ~ 10 lb/sq in. (simulator room); air conditioning ~ 113,500 BTU/hr.

PUBLICATIONS FURNISHED:

Maintenance Handbook with Parts Catalog - NAVTRADEV P-4153 (U); Planned Maintenance System - NAVTRADEV P-4154 (U); Commercial Computer Documentation Set - NAVTRADEV P-4110 (U); and Instructor Utilization Handbook - NAVTRADEV P-4157 (U.

PERSONNEL:

Instructor/Operators: Two (2); one of which must be a qualified KC-130R pilot. The other a qualified KC-130R Flight Engineer.

Trainees: One to three (1-3).

Maintenance: Five (5) Maintenance Personnel for an eight hour shift.

CONTRACT IDENTIFICATION:

Manufactured by the Singer Co., Simulation Products Division, Binghamton, NY under NAVTRASYSCEN Contract No. N61339-73-C-0120.

Modified by Aero Simulation Inc., Tampa, Florida, under NAWCTSD Contract Number N61339-95-C-0047.